

Customer No.: 31561
Docket No.: 10796-US-PA
Application No.: 10/710,344

In The Claims

1-9. (cancelled)

10. (original) A chip package structure, comprising:

a substrate, having an upper surface and a lower surface;

a chip, having an active surface and a back surface, wherein the active surface of the chip is mounted to the upper surface of the substrate, and the chip is electrically connected to the substrate;

a stiffener, disposed on the upper surface of the substrate and around the chip;

a first heat sink, disposed on the back surface of the chip and on the stiffener; and

a second heat sink, disposed on the lower surface of the substrate and below the chip,

wherein a coefficient of thermal expansion of the second heat sink is the same as that of the substrate.

11. (original) The package structure of claim 10, wherein the second heat sink further includes at least one fin to increase the heat dissipation efficiency.

12. (original) The package structure of claim 10, wherein a material of the first heat sink includes a metal.

13. (original) The package structure of claim 10, wherein a material of the second heat sink includes a metal.

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14. (original) The package structure of claim 10, further comprising a plurality of bumps through which the chip is mounted on the upper surface of the substrate and electrically connected to substrate.

15. (original) The package structure of claim 14, further comprising an underfill material between the chip and the substrate.

16. (currently amended) The package structure of claim 10, further comprising a plurality of solder balls, wherein the solder balls are disposed on the lower surface and around the second heat sink.

17. (original) The package structure of claim 10, wherein the stiffener and the first heat sink are integrally formed as an integral single body.

18. (original) The package structure of claim 10, wherein the lower surface of the substrate further has a central area and the second heat sink is attached to the central area.